

THE SYSTEMATIC POSITION OF THE GENUS *TAHITOCORIS* (HEMIPTERA: PENTATOMIDAE: PODOPINAE)

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Abstract.—New data are presented concerning the morphology of the monobasic genus *Tahitocoris*, especially its female genitalia and the distribution of its abdominal trichobothria. It is concluded that the subfamily Tahitocorinae should fall as a synonym of Podopinae.

The pentatomid subfamily Tahitocorinae, genus *Tahitocoris* (monobasic; type-species: *Tahitocoris cheesmanae* Yang) and species *Tahitocoris cheesmanae* were all founded by Yang (1935). The highly modified body form associated with extreme brachyptery is an obvious autapomorphy of no help in understanding its relationships. Advances in the past 60 years in the understanding of the structure of the female genitalia of Pentatomoidea and of the significance of the patterns of distribution of their abdominal trichobothria mean that a re-examination of Yang's original material can yield further information of value in determining the relationships of this enigmatic genus.

OBSERVATIONS

Material examined: holotype and paratype, both female, of *Tahitocoris cheesmanae* Yang, 1935, in the collection of the British Museum (Natural History), London. Both damaged, paratype lacking head.

Description. Small, brown, brachypterous; abdomen almost circular in outline. Body very strongly punctured (abdomen less strongly so), glabrous.

Head. Eyes strongly stylate, head in front of eyes smoothly rounded, antennifers visible in dorsal view. Ocelli absent. Tylus parallel-sided throughout; juga as long as tylus, plate-like, flat above. Bucculae short, posteriorly convergent and almost meeting at about level of antennifers. Labrum lost. Labial segment 1 stout, reaching to level of anterior border of eyes, segment 2 reaching to level of posterior margin of anterior coxa, segments 3 and 4 lost but apex of rostrum probably reaches base of abdomen as this has a median furrow. Antennae lost.

Thorax. Pronotum with lateral margins irregularly serrate, posterolateral angles each with a short, triangular tooth. Scutellum broad, apically truncate, reaching to suture between abdominal terga 2 and 3. Hemelytra wholly coriaceous, as long as scutellum, posterolateral angles abruptly sinuate. Metasternum with scent-gland orifice dorsad of coxa, well separated from anterior margin of pleuron, completely lacking raised auricle or depressed groove, surrounded by a dull area ("evaporatorium") which does not extend to margins of pleurite. Prosternum, mesosternum and metasternum all shallowly sulcate in midline, not keeled. Coxae short, each placed about its own diameter distant from its neighbours; rest of legs missing in both specimens examined except for mesothoracic leg (minus tarsus) of paratype, with femur mutic and tibia cylindrical but dorsally flattened in its apical one-sixth.

Abdomen. Abdominal tergum with laterotergites 2–7 differentiated; tergum 8 forming apical margin of abdomen in dorsal view; terga 3–7 fused together. Rudiments of scent-glands at posterior margin of tergum 3 small, widely separated, with small sacs; single, broad scar at posterior margin of tergum 4 and another at posterior margin of tergum 5. Sterna 3, 4 and base of 5 with continuous, shallow, median sulcus. Spiracle 2 slightly more mesially positioned than 3–7, just concealed by metapleuron. Trichobothria positioned posterior to spiracles and distinctly mesad of spiracular line, single except for a rudimentary second trichobothrium on one side of segment 5 of paratype.

Genitalia of female (male unknown). Laterotergites 8 joined by narrow bridge, spiracles 8 occluded. Triangulum large. No trace of valvulae or rami. Tergum 9 a narrow, transverse strip, tergum 10 a broader transverse strip, weakly sclerotized; sternum 10 relatively large, well sclerotized, perhaps with sclerotized additions to its anterior margin. Dorsal wall of gynatrium with two small, sclerotized knobs and a complete sclerite around aperture of spermathecal duct. Spermathecal bulb globular, adjacent to proximal pump flange; duct near distal pump flange dilated, with hollow, sclerotized rod running throughout dilation.

AFFINITIES

The body form of this insect is so highly modified that it could be derived from almost any macropterous pentatomoid type. In brachypterous pentatomoids whose macropterous morphs or near relatives have a triangular scutellum, the scutellum remains apically acute. The broadly truncate scutellum of *Tahitocoris* is almost certainly derived from a scutellerid- or podopine-like rounded scutellum. Gross (1975–1976) recognizes several such groups in his Australasian-centred account of pentatomoid diversity. The form of the spermatheca and the presence of a triangulum, with loss of distinct rami and valvulae, clearly place *Tahitocoris* in the family Pentatomidae *sensu stricto*. The enlarged first segment of the rostrum and posteriorly convergent bucculae might suggest a relationship with Asopinae but the stylate eyes are strongly suggestive of Podopinae (*Podops* group of Gross, 1975, 1976). This latter placement is further supported by the sombre coloration and the single trichobothria, found in several genera of tribe Podopini but not tribe Graphosomatini (Schaefer, 1981). It is concluded that *Tahitocoris* should fall as a synonym of Podopinae and Podopini NEW SYNONYMY.

NOTE

Usinger (1940:314) stated “further specimens [of *Tahitocoris*] have been collected by Zimmermann in Tahiti, and a single specimen . . . from Borabora.” He states further that “a fully macropterous Pentatomoid . . . from Ponape in the Caroline Is . . . may be . . . of this . . . group.” This last-mentioned insect is, in fact, *Ponapea arachnoides* Ruckes. (See Ruckes, 1963:326–328.) Attempts to trace Zimmermann’s specimens have not been successful.

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